

INTER-OFFICE LETTER

106051

TO Plainville

FROM Plainville

MR. P. G. Kremlick

DATE June 22, 1977

SUBJECT: CAPITAL EXPENDITURE APPROPRIATION FOR LAGOON REMOVAL

Attached is the Capital Expenditure Appropriation for Lagoon Removal. The method of disposal recommended, out of the several alternatives considered, represents the culmination of several months study by DeLeuw Cather and Company (DCO - TRW) of Chicago, Illinois and also represents the most cost effective method of removal.

Datagraphics of Pittsburgh, Pennsylvania was chosen to supply the Petrobac System which will literally consume the oil and sludge in the lagoon. The oil is converted by mutant bacteria to carbon dioxide, water, and microbial protoplasm. The microbial protoplasm is a biodegradable source of food for higher life forms and is acceptable for disposal in the sanitary sewer. This method has been used successfully by firms having waste oil disposal problems and is the one alternative that treats the supernatant as well as the supernatant strata of the lagoon.

James Grier of the State of Connecticut Department of Environmental Protection (DEP) has been a party in the review process and is in general agreement that the process is acceptable to both the DEP and the Plainville Sanitary Department. Throughout the course of the study Mr. Grier has maintained communication with Mr. Bob Prochaska (DCO) to insure that, in general, all methods under consideration were acceptable to the State Agency and local authorities.

The Connecticut Department of Environmental Protection is insisting that the treatment process be started this summer in order to solve and clean up a long standing problem (see Exhibit B for brief history). By beginning this summer, we will also minimize the TRW risk of liability that potentially exists since the lagoon is situated adjacent to the Town water supply.

The schedule to achieve the desired results will call for aggressiveness on our part but is attainable. Based on this, we are recommending approval of the appropriation prior to receipt of certified certificates of approval so that we may begin upon receipt of such certificates of approval.

James Grier has assured us that he will furnish approval within three weeks. We will not commit funds until all required certificates of approval have been received.

We have utilized Mr. James Diggs (I & R Legal Staff) for legal advice as required. He has been an active participant in the process of helping MRC to (1) retain its legal rights, and (2) be safeguarded against potential liabilities. He assisted Bob Prochaska (DCO) in writing specifications for quotations for contracts that will be used to implement the system (after receiving capital approval, along with State and local approvals).

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The project costs are tripartite: (1) purchase of the treatment and support systems, (2) purchase of fill, and (3) purchase of the Engineering report that DCO has completed. Our plan is to implement treatment this summer and defer filling the lagoon until next year. (See attached schedule - Exhibit A).

The optimal time to use this treatment is during the summer months, as the rate of change of oil conversion doubles for each ten degree rise in temperature between 50° and 90°F.

Datagraphics has assured us that there will be no offensive odors as a result of the treatment. Their field notes had indicated: pungent, ammonia, and hydrogen sulfide odors in the lab coming from the process. Normal bacteria in the air will consume the odor-causing bacteria from the process.

Bob Prochaska (DCO) is available at telephone T/M 120-365 (Comnet) and James Diggs (I & R Legal Staff) is available at T/M 2288 in the event that additional information is required.



Ron Putnam

gmj

Enclosures

AR200196

CAPITAL EXPENDITURE APPROPRIATION

TFC 671 REV. 6 PRINTED IN U.S.A.

June 21, 1977

DIVISION - WORKS Marlin Rockwell, Plainville		DEPARTMENT 5270	PROJECT NO 17-775-20C
PROJECT TITLE Lagoon Elimination		PRODUCT LINE Ball Bearings	17-775-20C Add Offset 17-775-20C Aband. \$300,000
QUARTERLY ESTIMATE OF EXPENDITURE 3rd & 4th Q. 1977		ESTIMATED LEAD TIME REQUIRED FOR DELIVERY 4 Weeks	TOTAL COMMITMENTS YEAR TO DATE
2nd, 3rd, 4th Quarter 1978			

ITEM	QTY	DESCRIPTION	EST LIFE YEARS	PURCHASED AMOUNT	FREIGHT	SHOP ORDER	TOTAL
1	1	Purchase necessary product, labor, and rental equipment to treat lagoon contents using Data-graphics System and dispose of treated contents.		\$ 129,090	\$ 1,000	\$ 1,000	\$ 131,090
2	1	Purchase fill, grade, and compact lagoon bed.		\$ 129,060			\$ 129,060
3	1	Purchase engineering report and services from DeLeuw Cather.		\$ 39,850			\$ 39,850
NOTE: State Sales Tax Not Applicable To Pollution Control Projects							
		CAPITAL INVESTMENT LOCAL CURRENCY TOTAL					
		CAPITAL INVESTMENT U.S. DOLLARS @ TOTAL		\$ 298,000	\$ 1,000	\$ 1,000	\$ 300,000

PROJECT OBJECTIVE

Purchase required services to (1) treat and dispose lagoon contents and (2) fill, grade, and compact lagoon bed in a manner that conforms to Abatement Order #2082 (issued to TRW-Marlin Rockwell Div. by the State of Connecticut Department of Environmental Protection - as authorized under chapter 474a, section 25-54K of the Connecticut General Statutes).

WORKING CAPITAL

TOTAL INVESTMENT

PRIMARY OBJECTIVE

- ☐ NEW PRODUCT ☐ R & D TECHNICAL CAPABILITY
☐ INCREASED CAPACITY ☒ POLLUTION CONTROL
☐ REPLACEMENT ☐ OTHER
☐ COST REDUCTION

SUMMARY

REPRESENTATIVE ANNUAL INCREASE IN PRE-TAX INCOME

DISCOUNTED CASH FLOW RATE OF RETURN ON INVESTMENT (AFTER TAX)

PAYBACK PERIOD

CAPITAL INVESTMENT

TOTAL INVESTMENT

PREPARED BY

DATE

DIVISION

APPROVALS

DATE

GROUP

DATE

MFG IE

MFG IE

MARKETING

MARKETING

FINANCE

FINANCE

PURCHASING

PURCHASING

ADMS. MANAGER

GROUP EXEC

DIV. MANAGER

CORP. MFG. STAFF

CEO

ALTERNATIVES CONSIDERED

1. Deep well underground disposal \$680,600 *
2. Reclamation by refineries \$724,100 *
3. Wastewater treatment systems \$328,515
4. Disposal by combustion \$568,347

* Requires additional soil treatment beyond listed cost.

ABANDONED

From Project #17-775-01 (Boiler & Gas Instr.) \$ 7,500
 From Project #17-775-08 (Material Handling) \$ 23,000
 From Project #17-775-09 (Notch Grinders) \$269,500

W

C

EXHIBIT "A"

Lagoon Elimination

Division Plainville Works

SCHEDULED PROJECT STATUS REPORT

CURRENT ESTIMATE *****

ORIGINAL ESTIMATE -----

ACTUAL -----

Month of

Put by R. Putnam

Proj. No.	Project Description	Est Time Compl	Act Time Compl	Requested to Assigned to	% Cmp	Project Year 19 77											
						Week Ending											
						6/26	7/3	7/10	7/17	7/24	7/31	8/7	8/14	8/21	8/28	9/4	9/11
1	Prepare Capital Appropriation Forward to Jamestown			Putnam		---											
2	Obtain Approval Of State & Local Authorities			Prochaaska													
3	Capital Approval Jamestown			Putnam													
4	Capital Approval Cleveland			Putnam													
5	Issue Letters Of Intent			Putnam													
6	Request Contract Bf (**A)			Prochaaska													
7	Is Contracts			Putnam													
8	In System			Prochaaska													

Division Plainville Works
 Month of _____
 Ppd by R. Putnam

SCHEDULED PROJECT STATUS REPORT

CURRENT ESTIMATE *****
 ORIGINAL ESTIMATE -----
 ACTUAL _____

Proj. No.	Project Description	Est Time Compl	Requested to	Assigned to	% Cmp	Project Year 19 77																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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EXHIBIT "B"
Capital Expenditure Appropriation For Lagoon Removal

BRIEF HISTORY

1.0 Prior to 1959, all effluents were discharged to two lagoons.

- 1.1 In 1959 the State of Connecticut issued an order to MRC to reduce the amount of liquid effluents being lagooned. This order resulted from a complaint by the Plainville Water Company regarding "foaming" of tap water which was alleged to have resulted from the use of anionic detergents in cleaning operations.
- 1.2 In 1959 the existing treatment building was constructed, in which all effluents were collected and chemically treated to crack the water soluble emulsions (further described in DeLeuw Cather and Company report (DCO). The clear water effluent from the cracking process was discharged (with State of Connecticut approval) to the Quinnipiac River. The sludge resulting from the cracking process (still 85-90% water) was diverted to the present lagoon. One lagoon was eliminated at the time.
- 1.3 On August 21, 1972 the State Department of Environmental Protection (DEP) issued an order (in response to a subsequent complaint from the Plainville Water Company) to (1) eliminate the need for lagooning, and (2) research a means for eliminating the lagoon. (See Exhibit 1.1.4a) The order was modified on 2/25/74 modifying planning dates and adding specific planning dates for implementation (see Exhibit 1.1.4b).
- 1.4 Lancey Laboratories designed, obtained State and local approvals, and installed a pollution control incinerator to burn liquid wastes and eliminate lagooning of wastes (capital projects 17-735-12 & 17-745-19).
(Special Note: This did not remove the lagoon itself.)
- 1.5 On December 19, 1975 James Grier (DEP) contacted Carl Holmberg (MRC) to discuss MRC plan's to eliminate the lagoon. He theorized that the lagoon could be dewatered by pumping to the Quinnipiac River and the balance of the contents treated. (A subsequent study indicated that contents in the lagoon exceeded tolerable limits of elements that could be discharged into the Quinnipiac; thus, rendering this method unacceptable.) (See Exhibit 1.1.6)
- 1.6 On June 24, 1976 MRC held discussions with DCO on the advice of Ed Gligrow (I & R Group Staff) to gather information about the lagoon and explore possible alternatives. DCO was authorized to undertake an information gathering mission on 8/4/76 to analyse the contents of the lagoon and recommend a suggested course of action to eliminate it. Mr. James Grier (DEP) was informed that DeLeuw Cather had been authorized to perform this study.

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- 1.7 DeLeuw Cather issued an interim report in January, 1977 which outlined incineration as a means of eliminating the lagoon. This was reviewed with James Grier (DEP) on February 23, 1977; at which time he requested that alternate methods of disposal be investigated because incineration was applicable to the supernatant but not to the subnatant portion of the lagoon. An expanded study was designed and both DeLeuw Cather and Minges Engineering firms filed bids with MRC to perform the study.
- 1.8 Abatement Order #2082 was entered on March 16, 1977 and received by MRC on March 22, 1977. (See Exhibit 1.1.9)
- 1.9 James Diggs (I & R Legal Staff) helped draft a response to the Commissioner regarding Abatement Order #2082. (See Exhibit 1.1.10a) A preliminary hearing was held in Hartford, Ct. on 5/6/77 and an official response to the Abatement Order was forwarded to the Commissioner on 5/9/77 (see Exhibit 1.1.10b). The order was modified on 5/27/77 (see Exhibit 1.1.1c).

Note: James Diggs has affirmed that the Connecticut General Statutes gives the DEP full authority to issue abatement orders and authorizes substantial court backing for implementation purposes. In his opinion (Diggs), there is no legal basis for avoiding cleaning up of the lagoon.

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